

EVA Wiki – Transforming Knowledge Management for EVA Flight Controllers and Instructors

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The EVA (Extravehicular Activity) Wiki was recently implemented as the primary knowledge database to retain critical knowledge and skills in the EVA Operations group at NASA's Johnson Space Center by ensuring that information is recorded in a common, searchable repository. Prior to the EVA Wiki, information required for EVA flight controllers and instructors was scattered across different sources, including multiple file share directories, SharePoint, individual computers, and paper archives. Many documents were outdated, and data was often difficult to find and distribute. In 2011, a team recognized that these knowledge management problems could be solved by creating an EVA Wiki using MediaWiki, a free and open-source software developed by the Wikimedia Foundation. The EVA Wiki developed into an EVA-specific Wikipedia on an internal NASA server. While the technical implementation of the wiki had many challenges, the one of the biggest hurdles came from a cultural shift. Like many enterprise organizations, the EVA Operations group was accustomed to hierarchical data structures and individually-owned documents. Instead of sorting files into various folders, the wiki searches content. Rather than having a single document owner, the wiki harmonized the efforts of many contributors and established an automated revision control system. As the group adapted to the wiki, the usefulness of this single portal for information became apparent. It transformed into a useful data mining tool for EVA flight controllers and instructors, and also for hundreds of other NASA and contract employees. Program managers, engineers, astronauts, flight directors, and flight controllers in differing disciplines now have an easier-to-use, searchable system to find EVA data. This paper presents the benefits the EVA Wiki has brought to NASA's EVA community, as well as the cultural challenges it had to overcome.

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